REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The Final Office Action of August 26, 2003 and Advisory Action dated January 26, 2004 have been received and their contents carefully reviewed.

By the present amendment, Applicants hereby amend claims 2 and 14, add new claims 23-25, and respectfully submit that no new matter has been entered.

In the Final Office Action, the Examiner rejected claims 1-10, 12-18, and 20-22 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. The rejection of these claims is traversed and reconsideration of the claims is respectfully requested in view of the following remarks.

In the outstanding Office Action, the Examiner rejected claims 1-10, 12-18, and 20-22 under 35 U.S.C. §112, first paragraph, "as failing to comply with the enablement requirement for the same reasons set forth in the ...office action [mailed April 18, 2003]."

In the Office Action mailed April 18, 2003, the Examiner stated "[t]he specification does not disclose the composition of the... [FLC]... material which still maintains the smectic phase when the liquid crystal panel is cooled to –20 degrees so as to produce monostable alignment of [FLC]..."

The Examiner then stated that the "composition of the FLC material is essential to support the claimed invention" and cited to Applicant's cited Asao et al., allegedly teaching "FLC-A became crystallized at –7.2 degrees C" and concluded that, due to the presence of Asao et al., "it is necessary to know what kind of FLC which still maintains the smectic phase when cooled to -20 degrees C."

According to M.P.E.P. § 2164.04, in order to make a rejection under 112 U.S.C. § 112, first paragraph, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. A specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. A reasonable basis to question enablement is established only when the Examiner provides a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure.

In articulating a lack of enablement rejection, the Examiner should focus on any of the following that would lead the Examiner to conclude the specification fails to teach how to make and use the claimed invention without undue experimentation: (1) factors such as: the breadth of the claims; the nature of the invention; the state of the prior art; the level of ordinary skill; the level of predictability in the art; the amount of direction provided by the inventor; the existence of working examples; the quantity of experimentation needed to make or use the invention based on the content of the disclosure; (2) evidence as a whole; and (3) any reason(s) to doubt the objective truth of the specification. While references can be supplied to support a *prima facie* case of lack of enablement, specific technical reasons are always required.

A proper finding of lack of enablement can be done by making specific findings of fact, supported by the evidence, and then drawing conclusions based on these findings of fact.

For example, if doubt arises about enablement because information is missing about an essential part which one skilled in the art could not develop without undue experimentation, the Examiner should specifically identify what information is missing and why one skilled in the art could not supply the information without undue experimentation. See M.P.E.P. § 2164.06(a).

In the Office Action mailed April 18, 2003, the Examiner specifically noted that the specification failed to disclose a particular composition of FLC material. The Examiner further cited Asao et al. as allegedly teaching a composition of FLC material that becomes crystallized at -7.2°C and concluded "Therefore, it is necessary to know what kind of FLC which still maintains the smectic phase when cooled to -20 degrees C."

Applicants respectfully submit, however, the Examiner failed to provide any explanation as to why one skill in the art could not determine a suitable FLC material composition without undue experimentation, as set forth in M.P.E.P. § 2164.06(a). In failing to establish the missing combination could not have been determined by one skilled in the art without undue experimentation, the Examiner has failed to provide a reasonable basis to question the enablement provided for the claimed inventions.

In the Office Action of August 26, 2003, the Examiner stated "...a reasonable basis to question the enablement provided for by the claimed invention... [has been established]. That is "the composition of the ...(FLC) material which still maintains the smectic phase when the liquid crystal panel is cooled to -20 degrees to produce monostable alignment of [FLC], then substantially heated to room temperature." The Examiner further stated "This composition of the FLC material, which is essential to support the claimed invention, is not disclosed by Applicant in the specification."

Applicants respectfully submit, however, the Examiner has merely noted that the specification failed to disclose the particular composition of FLC material. As mentioned above, however, alleging a supportive deficiency in the specification satisfies only the first of two requirements necessary to establish a *prima facie* case of lack of enablement. The second of the two requirements necessary to establish a *prima facie* case of lack of enablement (i.e., a reason as to why one skilled in the art could not supply the missing information without undue experimentation), however, has not been, and cannot be, established by merely citing a single reference containing an allegedly contrary teaching.

Applicants respectfully submit it cannot be reasonably presumed that all FLC material has a crystallization temperature of –7.2 °C simply because Asao et al. teaches a crystallization temperature of a particular type of FLC material to be –7.2 °C. Applicants respectfully submit one of ordinary skill in the art would readily recognize compositions of FLC material that exhibit the phase transition characteristics described by the specification of the instant application.

The Examiner further states in the Office Action of August 26, 2003, "It should be noted that the reference to Asao et al. is used as specific evidence for disclosing the composition of FLC in the experiment. And because types of FLC have crystalline phase transitions occurring over a range of well documented temperatures, the Examiner would like to know what type of FLC which still maintains the smectic phase when cooled to -20 degrees C. This information is missing in the specification."

Firstly, Applicants respectfully submit that the Examiner's statement made above (that "...types of FLC have crystalline phase transitions [occur] over a range of well documented temperatures... [and] the Examiner would like to know what type of FLC ...still

maintains the smectic phase when cooled to -20 degrees C") implies numerous compositions of FLC material exhibiting the characteristics defined in the specification (e.g., that maintain a smectic phase when cooled to -20°C) exist and are well known to those of ordinary skill in the art. Accordingly, Applicants respectfully submit the Examiner's above-statement constitutes an admission as to the prevalence of FLC material compositions having the functional characteristics defined in the specification are well known to those of ordinary skill in the art, thereby eliminating the need to expressly disclose those compositions of FLC material within the present application.

Further, Applicants respectfully submit that while Asao et al. may have been used by the Examiner "as specific evidence for disclosing the composition of FLC in the experiment," Asao et al. still fails to provide any evidence that one skilled in the art would obtain a particular composition of FLC material having the characteristics described in the specification through undue experimentation. Indeed, Applicants respectfully direct the Examiner's attention to McDonnell et al. (U.S. Pat. No. 6,151,096), cited by the Examiner in an Office Action dated November 6, 2002. McDonnell et al. discloses at column 10, lines 30-35 wherein an FLC material has a crystalline-smectic phase transition temperature of -20°C. Applicants citation of McDonnell et al. in no way constitutes an admission that the FLC material claimed in the present invention is the FLC material of McDonnell et al. Rather, McDonnell et al. has merely been cited as an illustrative example that FLC material having properties that are alleged by the Examiner to find no support in the specification, are known by those skilled in the art.

Further, Applicants respectfully submit the purpose of 35 U.S.C. § 112, first paragraph, is not to satisfy curiosities held by the Examiner. Rather, requiring the

specification to describe the invention in such terms that one skilled in the art can make and use the claimed invention, 35 U.S.C. § 112, first paragraph, ensures that the invention will be communicated to the interested public in a meaningful way. The purpose of the enablement requirement is to assure that the Applicants provide sufficient information about the claimed invention that a person of skill in the field of the invention can make and use it without undue experimentation, relying on the specification and the knowledge in the art. As noted in the response filed July 9, 2003, Applicants respectfully reiterate that one of ordinary skill in the art would readily recognize compositions of FLC material that exhibit the characteristics described by the specification of the instant application.

Accordingly, Applicants respectfully submit the present application is in full compliance with 35 U.S.C. § 112, first paragraph.

Lastly, Applicants respectfully note that the subject matter which forms the basis of the rejection under 35 U.S.C. § 112, first paragraph, (i.e., "the composition of the ...(FLC) material which ...maintains the smectic phase when the liquid crystal panel is cooled to [-20°C] to produce monostable alignment of ferroelectric liquid crystal") is not found in any of claims 1, 3-9, 10-13, and 15-22. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1, 3-13, and 15-22 under 35 U.S.C. § 112, first paragraph.

Applicants believe the application in condition for allowance and early, favorable action is respectfully solicited. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

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If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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